

Serial No. **10/720,385**

Docket No. **K-0196A**

Amendment dated **DECEMBER 27, 2004**

Reply to Office Action of **JUNE 29, 2004**

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 21. Canceled.

22. (Currently Amended) A plasma display panel comprising:

a plurality of first sustain electrodes arranged on a first substrate; and

a plurality of second sustain electrodes spaced apart from the first sustain electrodes ~~to form, the plurality of first and second electrodes providing~~ a plurality of gaps, wherein the first and the second sustain electrodes form a plurality of electrode pairs,

wherein a total surface area of the plurality of gaps is less than or equal to about 25% of a total surface area of the first sustain electrodes and the second sustain electrodes, and

wherein each of the first sustain electrodes comprises a first transparent electrode having a first prescribed width defined by a first end and a second end and a first bus electrode of a narrower width formed on the first transparent electrode near the second end of the first transparent electrode, each of the second sustain electrodes comprises a second transparent electrode having a second prescribed width defined by a first end and a second end and a second

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bus electrode of a narrower width formed on the second transparent electrode near the second end of the second transparent electrode, and each gap is provided by a span of distance between the first end of the first transparent electrode and the first end of the second transparent electrode.

23. (Currently Amended) The plasma display panel of claim ~~23~~22, wherein the first sustain electrodes and the second sustain electrodes are alternately arranged on the first substrate.

24. (Previously Presented) The plasma display panel of claim 23, wherein adjacent pairs are in different positions with respect to the first and second sustain electrodes.

25. (Currently Amended) The plasma display panel of claim ~~23~~22, further comprising:
a plurality of barriers including at least one of a plurality of first barriers formed perpendicular to the first sustain electrodes and a plurality of second barriers formed parallel to the first sustain electrodes; and

a first dielectric layer formed over the plurality of first sustain electrodes and the plurality of second sustain electrodes.

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26. (Currently Amended) The plasma display panel of claim ~~23~~25, wherein the first dielectric layer is formed to cover the plurality of first and second sustain electrodes and has a thickness of about 25 μ m or more.

27. (Currently Amended) The plasma display panel of claim ~~23~~22, wherein a total surface area of the first sustain electrodes is substantially equal to a total surface area of the second sustain electrodes.

28. (Canceled).

29. (Currently Amended) A plasma display panel comprising:
a plurality of first sustain electrodes arranged on a first substrate; and
a plurality of second sustain electrodes spaced apart from the first sustain electrodes ~~to form, the plurality of first and second sustain electrodes providing~~ a plurality of gaps, and the first and second sustain electrodes form forming a plurality of electrode pairs,
wherein each of the first sustain electrodes comprises a first transparent electrode having a first prescribed width defined by a first end and a second end and a first bus electrode of a narrower width formed on the first transparent electrode near the second end of the first transparent electrode, each of the second sustain electrodes comprises a second transparent

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electrode having a second prescribed width defined by a first end and a second end and a second bus electrode of a narrower width formed on the second transparent electrode near the second end of the second transparent electrode, and each gap is provided by a span of distance between the first end of the first transparent electrode and the first end of the second transparent electrode, and

wherein a combined ~~width~~ span of the plurality of gaps is less than or equal to about 25% of a combined width of the first ~~sustain electrodes~~ prescribed width and the second ~~sustain electrodes~~ prescribed width.

30. (Currently Amended) The plasma display panel of claim 29, wherein the first sustain electrodes and the second sustain electrodes are alternately arranged on the first substrate.

31. (Previously Presented) The plasma display panel of claim 29, wherein the first sustain electrodes and the second sustain electrodes are arranged in pairs where adjacent pairs are in different positions with respect to the first and second sustain electrodes.

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32. (Currently Amended) The plasma display panel of claim 29, further comprising:
a plurality of barriers including at least one of a plurality of first barriers formed perpendicular to the first sustain electrodes and a plurality of second barriers formed parallel to the first sustain electrodes; and
a first dielectric layer formed over the plurality of first sustain electrodes and the plurality of second sustain electrodes.

33. (Currently Amended) The plasma display panel of claim ~~29~~32, wherein the first dielectric layer is formed to cover the plurality of first and second sustain electrodes, and has a thickness of about 25μm or more.

34. (Currently Amended) The plasma display panel of claim 29, wherein a combined width of the first ~~sustain electrodes~~ prescribed width is substantially equal to a combined width of the second ~~sustain electrodes~~ prescribed width.

35. (Currently Amended) The plasma display panel of claim 29, wherein widths of at least two of the plurality of gaps are substantially equal ~~or different~~.

36. (Canceled).

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37. (Currently Amended) A plasma display panel comprising:

a plurality of first sustain electrodes arranged on a first substrate; and

a plurality of second sustain electrodes spaced apart from the first sustain electrodes ~~to form~~, said plurality of first and second sustain electrodes providing a plurality of gaps, and the first and second sustain electrodes forming a plurality of electrode pairs,

wherein each of the first sustain electrodes comprises a first transparent electrode having a first prescribed width defined by a first end and a second end and a first bus electrode of a narrower width formed on the first transparent electrode near the second end of the first transparent electrode, each of the second sustain electrodes comprises a second transparent electrode having a second prescribed width defined by a first end and a second end and a second bus electrode of a narrower width formed on the second transparent electrode near the second end of the second transparent electrode, and each gap is provided by a span of distance between the first end of the first transparent electrode and the first end of the second transparent electrode, and

wherein a combined ~~width-span~~ of the plurality of gaps is less than or equal to about 50% of a combined width of the first ~~sustain electrodes~~ prescribed width.

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38. (Currently Amended) The plasma display panel of claim 37, wherein the first sustain electrodes and the second sustain electrodes are alternately arranged on the first substrate.

39. (Previously Presented) The plasma display panel of claim 37, wherein the first sustain electrodes and the second sustain electrodes are arranged in pairs where adjacent pairs are in different positions with respect to the first and second sustain electrodes.

40. (Currently Amended) The plasma display panel of claim 37, further comprising:
a plurality of barriers including at least one of a plurality of first barriers formed perpendicular to the first sustain electrodes and a plurality of second barriers formed parallel to the first sustain electrodes; and

a first dielectric layer formed over the plurality of first sustain electrodes and the plurality of second sustain electrodes.

41. (Currently Amended) The plasma display panel of claim ~~37~~40, wherein the first dielectric layer is formed to cover the plurality of first and second sustain electrodes and has a thickness of about 25μm or more.

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42. (Currently Amended) The plasma display panel of claim 37, wherein a combined width of the first ~~sustain electrodes~~ prescribed width is substantially equal to a combined width of the second ~~sustain electrodes~~ prescribed width.

43. (Previously Presented) The plasma display panel of claim 37, wherein widths of at least two of the plurality of gaps are substantially equal.

44. (Canceled).

45. (Currently Amended) A plasma display panel comprising:
a plurality of first sustain electrodes arranged on a first substrate; and
a plurality of second sustain electrodes spaced apart from the first sustain electrodes ~~to form~~, the plurality of first and second sustain electrodes providing a plurality of gaps, and the first and second sustain electrodes forming a plurality of electrode pairs,
wherein each of the first sustain electrodes has a first prescribed width defined by a first end and a second end, each of the second sustain electrodes has a second prescribed width defined by a first end and second end, and each gap is provided by a span of distance between the first end of the first sustain electrode and the first end of the second sustain electrode,

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wherein ~~each gap has a width~~ of the span for each gap being less than or equal to about 20% of a pixel pitch, which is an overall distance of three adjacent display cells, wherein the three adjacent display cells are a red display cell, a green display cell, and a blue display cell.

46. (Currently Amended) The plasma display panel of claim 45, wherein the first sustain electrodes and the second sustain electrodes are alternately arranged on the first substrate.

47. (Previously Presented) The plasma display panel of claim 45, wherein the first sustain electrodes and the second sustain electrodes are arranged in pairs where adjacent pairs are in different positions with respect to the first and second sustain electrodes.

48. (Currently Amended) The plasma display panel of claim 45, further comprising:
a plurality of barriers including at least one of a plurality of first barriers formed perpendicular to the first sustain electrodes and a plurality of second barriers formed parallel to the first sustain electrodes; and

a first dielectric layer formed over the plurality of first sustain electrodes and the plurality of second sustain electrodes.

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49. (Currently Amended) The plasma display panel of claim 45~~48~~, wherein the first dielectric layer is formed to cover the plurality of first and second sustain electrodes, and has a thickness of about 25μm or more.

50. (Previously Presented) The plasma display panel of claim 45, wherein a combined width of the first sustain electrodes is substantially equal to a combined width of the second sustain electrodes.

51. (Previously Presented) The plasma display panel of claim 45, wherein widths of at least two of the plurality of gaps are substantially equal.

52. (Canceled).

53. (Previously Presented) The plasma display panel of claim 45, wherein the pixel pitch is an overall distance of three adjacent display cells including a width of barrier between the display cells.

54. (Currently Amended) A plasma display panel comprising:
a plurality of first sustain electrodes arranged on a first substrate; and

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a plurality of second sustain electrodes spaced apart from the first sustain electrodes ~~to form~~, the plurality of first and second sustain electrodes providing a plurality of gaps, and the first and second sustain electrodes forming a plurality of electrode pairs,

wherein each of the first sustain electrodes has a first prescribed width defined by a first end and a second end, each of the second sustain electrodes has a second prescribed width defined by a first end and second end, and each gap is provided by a span of distance between the first end of the first sustain electrode and the first end of the second sustain electrode,

wherein a combined ~~width-span~~ of the plurality of gaps is less than or equal to about 25% of a combined width of the first sustain electrodes and the second sustain electrodes, and ~~each gap has a width~~ of the span for each gap being less than or equal to about 20% of a pixel pitch, which is an overall distance of three adjacent display cells, wherein the three adjacent display cells are a red display cell, a green display cell, and a blue display cell.

55. (Currently Amended) The plasma display panel of claim 54, wherein the first sustain electrodes and the second sustain electrodes are alternately arranged on the first substrate.

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56. (Previously Presented) The plasma display panel of claim 54, wherein the first sustain electrodes and the second sustain electrodes are arranged in pairs where adjacent pairs are in different positions with respect to the first and second sustain electrodes.

57. (Currently Amended) The plasma display panel of claim 54, further comprising:
a plurality of barriers including at least one of a plurality of first barriers formed perpendicular to the first sustain electrodes and a plurality of second barriers formed parallel to the first sustain electrodes; and

a first dielectric layer formed over the plurality of first sustain electrodes and the plurality of second sustain electrodes.

58. (Currently Amended) The plasma display panel of claim ~~54~~57, wherein the first dielectric layer is formed to cover the plurality of first and second sustain electrodes, and has a thickness of about 25μm or more.

59. (Previously Presented) The plasma display panel of claim 54, wherein a combined width of the first sustain electrodes is substantially equal to a combined width of the second sustain electrodes.

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60. (Previously Presented) The plasma display panel of claim 54, wherein widths of at least two of the plurality of gaps are substantially equal.

61. (Canceled).

62. (Previously Presented) The plasma display panel of claim 54, wherein the pixel pitch is an overall distance of three adjacent display cells including a width of barrier between the display cells.

63. (Currently Amended) The plasma display panel of claim 54, wherein ~~a~~the combined ~~width-span~~ of the plurality of gaps is less than or equal to about 50% of a combined width of the first sustain electrodes.

64. (Currently Amended) The plasma display panel of claim 54, wherein ~~a~~the combined ~~width-span~~ of the plurality of gaps is less than or equal to about 50% of a combined width of the second sustain electrodes.

65. (Currently Amended) A plasma display panel comprising:
a first sustain electrode arranged on a first substrate; and

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a second sustain electrode spaced apart from the first sustain electrode to form, ~~the first and second sustain electrodes providing a gap therebetween and forming an electrode pair,~~

wherein the first sustain electrode has a first prescribed width defined by a first end and a second end, the second sustain electrode has a second prescribed width defined by a first end and second end, and the gap is provided by a span of distance between the first end of the first sustain electrode and the first end of the second sustain electrode,

wherein a width of the span for the gap is less than or equal to about 25% of a combined width of the first sustain electrode and the second sustain electrode, and the gap has a width for the gap being less than or equal to about 20% of a pixel pitch, which is an overall distance of three adjacent display cells, wherein the three adjacent display cells are a red display cell, a green display cell, and a blue display cell.

66. (Currently Amended) The plasma display panel of claim 65, further comprising:
- a plurality of barriers including at least one of a plurality of first barriers formed perpendicular to the first sustain electrode and a plurality of second barriers formed parallel to the first sustain electrode; and
 - a first dielectric layer formed over the first sustain electrode and the second sustain electrode.

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67. (Currently Amended) The plasma display panel of claim ~~65~~66, wherein the first dielectric layer is formed to cover the plurality of first and second sustain electrodes, and has a thickness of about 25μm or more.

68. (Currently Amended) The plasma display panel of claim 65, wherein ~~a~~the first prescribed width of the first sustain electrode is substantially equal to ~~a~~the second prescribed width of the second sustain electrode.

69. (Canceled).

70. (Currently Amended) The plasma display panel of claim 65, wherein the pixel pitch is an overall distance of three adjacent display cells including a width of barrier between the display cells.

71. (Currently Amended) The plasma display panel of claim 65, wherein the width of the gap is less than or equal to about 50% of the first prescribed width of the first sustain electrode.

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72. (Previously Presented) The plasma display panel of claim 65, wherein the width of the gap is less than or equal to about 50% of the second prescribed width of the second sustain electrode.

73. (New) The plasma display panel of claim 45, 54 or 65, wherein the first sustain electrode comprises a first transparent electrode having the first prescribed width defined by the first end and the second end and a first bus electrode of a narrower width formed on the first transparent electrode near the second end of the first transparent electrode, and the second sustain electrode comprises a second transparent electrode having the second prescribed width defined by the first end and the second end and a second bus electrode of a narrower width formed on the second transparent electrode near the second end of the second transparent electrode.

74. (New) The plasma display panel of claim 22, 29, 37, 45, 54 or 65 further comprising:

a plurality of address electrodes formed on a second substrate and perpendicular to the first and second sustain electrodes and a plurality of cells being located at intersections of the address electrodes and the electrode pair;

a plurality of barrier ribs formed between the first and second substrates; and

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a first dielectric layer formed on the first and second sustain electrodes.

75. (New) The plasma display panel of claim 74, wherein each barrier rib is positioned between adjacent address electrodes.

76. (New) The plasma display panel of claim 26, 33, 41, 49, 58 or 67, wherein the thickness of the first dielectric layer is less than or equal to 40 μ m.

77. (New) The plasma display panel of claim 74, wherein a second dielectric layer is formed on the plurality of address electrodes.

78. (New) The plasma display panel of claim 74, wherein each cell includes a phosphor layer.

79. (New) The plasma display panel of claim 22, 29, 37, 45, 54 or 65, wherein each of the first prescribed width and the second prescribed width is between an upper limit and a lower limit.

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80. (New) The plasma display panel of claim 79, wherein the upper limit is 512 μ m.
81. (New) The plasma display panel of claim 80, wherein the lower limit is 320 μ m.
82. (New) The plasma display panel of claim 74, wherein the first dielectric has a thickness between a lower limit and an upper limit.
83. (New) The plasma display panel of claim 82, wherein the lower limit is 25 μ m.
84. (New) The plasma display panel of claim 83, wherein the upper limit is 40 μ m.
85. (New) The plasma display panel of claim 22, 29 or 37, wherein the first prescribed width is a first prescribed percentage of a pixel pitch, which is an overall distance of three adjacent display cells, wherein the three adjacent display cells are a red display cell, a green display cell and an blue display cell.
86. (New) The plasma display panel of claim 85, wherein the second prescribed width is a second prescribed percentage of the pixel pitch.

87. (New) The plasma display panel of claim 86, wherein each of the first and second prescribed percentage is greater than about 40%.

88. (New) The plasma display panel of claim 85, wherein the span of distance is a prescribed percentage of the pixel pitch, the prescribed percentage being lower than an upper limit and greater than a lower limit.

89. (New) The plasma display panel of claim 88, wherein the upper limit is 20%.

90. (New) The plasma display panel of claim 89, wherein the lower limit is 10%.

91. (New) The plasma display panel of claim 85, wherein the overall distance of three adjacent cells is defined by four barrier ribs.

92. (New) The plasma display panel of claim 74, wherein a protective layer is provided on the first dielectric layer.

93. (New) The plasma display panel of claim 22, 29 or 37, wherein an end of the first bus electrode is substantially aligned with the second end of the first transparent electrode and

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an end of the second bus electrode is substantially aligned with the second end of the second transparent electrode.

94. (New) The plasma display panel of claim 73, wherein an end of the first bus electrode is substantially aligned with the second end of the first transparent electrode and an end of the second bus electrode is substantially aligned with the second end of the second transparent electrode.